

# Comparisons of Job Characteristics

**Focus Occupation:** Microbiologists (19-1022)

**Associated Occupation:** Biological Scientists, All Other (19-1029)

[Compare Knowledge](#)

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<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

## Knowledge

Similarity of Focus Occupation to Associated Occupation: 99

**Focus Occupation:** Microbiologists (19-1022)

**Associated Occupation:** Biological Scientists, All Other (19-1029)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Biology	3.7	24.4	24.1	0	Current knowledge level may be sufficient
English Language	11.2	18.2	16.6	0	Current knowledge level may be sufficient
Chemistry	4.8	16.4	15.2	0	Current knowledge level may be sufficient
Mathematics	9.2	14.7	12.8	<	Expanded education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Skills

Similarity of Focus Occupation to Associated Occupation: 97

**Focus Occupation:** Microbiologists (19-1022)

**Associated Occupation:** Biological Scientists, All Other (19-1029)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Reading Comprehension	10.7	18.5	15.5	<	A higher skill level may be required
Writing	9.2	16.2	14.8	0	Current skill level may be sufficient
Science	4.5	16.1	17.0	0	Current skill level may be sufficient
Critical Thinking	10.8	15.7	15.0	0	Current skill level may be sufficient
Active Learning	8.7	15.0	14.7	0	Current skill level may be sufficient
Judgment and Decision Making	9.4	13.2	12.4	0	Current skill level may be sufficient
Complex Problem Solving	9.1	13.1	11.5	<	A higher skill level may be required
Mathematics	6.2	12.6	11.0	<	A higher skill level may be required
Learning Strategies	7.2	12.2	12.2	0	Current skill level may be sufficient
Systems Analysis	6.5	11.0	10.6	0	Current skill level may be sufficient
Systems Evaluation	6.4	10.5	9.9	0	Current skill level may be sufficient

Management of Material Resources	3.7	6.6	6.0	0	Current skill level may be sufficient
Programming	2.2	5.1	4.7	0	Current skill level may be sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 96			
Focus Occupation: Microbiologists (19-1022)					
Associated Occupation: Biological Scientists, All Other (19-1029)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Written Comprehension	11.0	18.5	16.5	<	Some improvement in abilities may be required
Oral Comprehension	12.5	17.9	15.3	<	Some improvement in abilities may be required
Written Expression	9.8	17.9	15.5	<	Some improvement in abilities may be required
Oral Expression	12.4	17.1	15.0	<	Some improvement in abilities may be required
Inductive Reasoning	10.2	16.1	18.0	>	Current ability level is likely sufficient
Deductive Reasoning	10.6	15.6	15.7	0	Current ability level may be sufficient
Problem Sensitivity	11.1	14.4	16.1	>	Current ability level is likely sufficient
Near Vision	11.1	13.9	15.0	0	Current ability level may be sufficient
Mathematical Reasoning	6.3	13.3	11.5	<	Some improvement in abilities may be required
Category Flexibility	9.0	13.2	16.0	>	Current ability level is likely sufficient
Number Facility	6.3	11.8	11.0	0	Current ability level may be sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

There are no common work activities.

Tools and Technologies that Both Occupations Have in Common		Similarity of Focus Occupation to Associated Occupation: 85
<b>Focus Occupation: Microbiologists (19-1022)</b> <b>Associated Occupation: Biological Scientists, All Other (19-1029)</b>		
Tools and Technologies	Exclusivity	
Autoclave and sterilizer equipment and accessories	12	
Chemical evaluation instruments and supplies	10	
Chromatographic measuring instruments and accessories	16	
Clinical and diagnostic analyzers and accessories and supplies	18	
Computers	1	
Content authoring and editing software	1	
Data management and query software	1	

Electrochemical measuring instruments and accessories	9
General laboratory glassware and plasticware and supplies	13
Indicating and recording instruments	2
Industry specific software	1
Information exchange software	1
Laboratory baths	24
Laboratory centrifuges and accessories	13
Laboratory cooling equipment	25
Laboratory electron and solid state physics equipment	29
Laboratory electrophoresis and blotting system and supplies	26
Laboratory enclosures and accessories	17
Laboratory heating and drying equipment	13
Laboratory incubating equipment	20
Laboratory mixing and stirring and shaking equipment and supplies	19
Laboratory ovens and accessories	15
Laboratory pumps and tubing	23
Laboratory water purification equipment and supplies	29
Network applications software	1
Pipettes and liquid handling equipment and supplies	16
Safety apparel	4
Spectroscopic equipment	10
Test Tubes	26
Viewing and observing instruments and accessories	4
Vision protection and accessories	3
Weight measuring instruments	7

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.